

AMENDMENTS TO THE CLAIMS

Please replace all prior claims in the application with the following listing of claims:

Listing of Claims:

1-31. (canceled)

32. (previously presented) A method for maintaining a concentration range of an electroreducible metal species during electrolysis, comprising:
containing in a first container a body of a solution including dissolved metal;
maintaining a second body of the solution in a second container in fluid communication with the first container, the dissolved metal of the second body having a concentration;
circulating the second body through an electrolyzer;
electrolyzing a portion of the dissolved metal of the second body in the electrolyzer;
sensing the concentration; and
exchanging solution between the first and second containers responsive to the sensed concentration.

33. (previously presented) The method of claim 32 further comprising maintaining a temperature of the second body within a predetermined range.

34. (previously presented) The method of claim 33 wherein the range is between about 25 degrees and about 65 degrees C.

35. (previously presented) The method of claim 33 wherein the range is between about 40 degrees and about 55 degrees C.

36. (previously presented) The method of claim 33 further comprising sensing the temperature of the second body, and wherein the maintaining step comprises exchanging the solution responsive to the sensed temperature.

37. (previously presented) The method of claim 36 wherein the maintaining step comprises heating the second body responsive to the sensed temperature.

38. (previously presented) The method of claim 36 wherein the maintaining step comprises cooling the second body responsive to the sensed temperature.

39. (previously presented) A method for maintaining a concentration range of an electroreducible metal species during electrolysis, comprising:

- containing in a first container a body of a solution including dissolved metal;
- maintaining a second body of the solution in a second container in fluid communication with the first container through valved ports, the dissolved metal of the second body having a concentration;

- electrolyzing metal in the second body in an electrolyzer;

- sensing the concentration;

- if the sensed concentration falls within a predetermined range,

- closing the ports; and

- circulating the second body through the electrolyzer;

- if the sensed concentration falls outside of the predetermined range,

- opening the ports; and

- circulating solution from the first container through the electrolyzer.

40. (previously presented) The method of claim 39 further comprising maintaining a temperature of the second body within a predetermined range.

41. (previously presented) The method of claim 40 wherein the range is between about 25 degrees and about 65 degrees C.

42. (previously presented) The method of claim 40 wherein the range is between about 40 degrees and about 55 degrees C.

43. (previously presented) The method of claim 40 further comprising sensing the

temperature of the second body, and wherein the maintaining step comprises exchanging the solution responsive to the sensed temperature.

44. (previously presented) The method of claim 43 wherein the maintaining step comprises heating the second body responsive to the sensed temperature.

45. (previously presented) The method of claim 43 wherein the maintaining step comprises cooling the second body responsive to the sensed temperature.

46. (new) The method of claim 33 further comprising maintaining the temperature by immersing a cooling coil at least partially within the second body.

47. (new) The method of claim 33 further comprising maintaining the temperature by immersing a heating element at least partially within the second body.

48. (new) The method of claim 32 wherein the exchanging step further comprises circulating the solution between the first and second containers by means of a pump.

49. (new) The method of claim 48 further comprising circulating the solution through an inlet between the first container and the pump, and through an outlet between the pump and the second container.

50. (new) The method of claim 48 further comprising circulating the solution to the pump through a tempering valve having first and second valve inlets, the first valve inlet in fluid communication with the first container and the second valve inlet in fluid communication with the second container.

51. (new) The method of claim 32 wherein the exchanging step further comprises returning the solution from the second container to the first container by means of a dump valve.

52. (new) The method of claim 32 wherein the dissolved metal is in a form of one or more oxides of the metal.

53. (new) The method of claim 32 wherein the solution comprises a reaction product of an electrochemical reaction in a metal/air fuel cell.
54. (new) The method of claim 32 wherein the dissolved metal is zinc.
55. (new) The method of claim 32 wherein the solution comprises an aqueous solution.
56. (new) The method of claim 55 wherein the aqueous solution comprises dissolved electrolyte and a suspension of metal oxide.
57. (new) The method of claim 32 wherein the exchanging step maintains the concentration between about 0.5M and 4.0M.
58. (new) The method of claim 32 wherein the exchanging step maintains the concentration between about 1.0M and 2.5M.
59. (new) A method for maintaining a concentration range of an electroreducible metal species during electrolysis, comprising:
- containing in a first container a body of a solution including dissolved metal, the dissolved metal of the body having a first concentration;
 - maintaining a second body of the solution in a second container in fluid communication with the first container, the dissolved metal of the second body having a second concentration;
 - circulating the second body through an electrolyzer;
 - electrolyzing a portion of the dissolved metal of the second body in the electrolyzer;
 - sensing the first concentration;
 - sensing the second concentration; and
 - exchanging solution between the first and second containers responsive to the sensed concentrations.